

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for the fabrication of a polymeric optical ~~microstructure, being supported or not~~ microstructure comprising the acts of:
supporting the microstructure by a substrate,
~~starting from forming a thermoplastic mixture,~~
~~wherein mixture by blending a thermoplastic polymer is blended~~
with a UV curable resin and a thermally stable photo-initiator, to obtain a blend having a lower viscosity than the viscosity of said polymer, ~~said blend being molded and the molded blend being cured by means of~~ polymer;
molding said blend; and
curing the molded blend by UV radiation to obtain a ~~the~~
polymeric optical microstructure having a thickness to diameter

ratio of the polymeric optical microstructure is from 1/50 to 1/1000.

2. (Currently Amended) A The process according to claim 1, wherein said thermoplastic polymer has a weight-average molecular weight from 0.1 to 5 times the critical molecular weight for entanglement, ~~M_{eff} more preferably in the range from 0.5 to 2 times M_{eff} to M_{cr} .~~

3. (Currently Amended) A The process according to claim 1, wherein said thermoplastic polymer contains a minor amount of reactive groups.

4. (Currently Amended) A The process according to claim 1, wherein said thermoplastic polymer is an amorphous thermoplastic polymer.

5. (Currently Amended) A The process according to claim 1, wherein said thermoplastic polymer is a copolymer or terpolymer.

6. (Currently Amended) A The process according to claim 1, wherein said thermoplastic polymer is selected from the group, consisting of ~~polymethylmethacrylate,~~ polyethylmethacrylate, polyhexylmethacrylate, polydecylmethacrylate, polymethylacrylate, polyethylacrylate, polyhexylacrylate, polydecylacrylate, polyvinylacetate, polystyrene, poly- α -methylstyrene, poly- α -ethylstyrene, ~~polycarbonate,~~ polyester, cycloolefinic polymer and cyclo-olefinic copolymer.

7. (Currently Amended) A The process according to claim 1, wherein the concentration of the UV curable resin is from 20 - 80 vol.%, ~~more preferably from 40 - 60 vol.%~~ of said blend.

8. (Currently Amended) A The process according to claim 1, wherein said UV curable resin is an epoxy resin, preferably diglycidylether resin including diglycidylether of bisphenol-A.

9. (Currently Amended) A The process according to claim 1, wherein said UV curable resin is selected from the group consisting of acrylates and ~~methacrylates,~~ preferably ~~ethoxylated bisphenol-A~~

~~dimethacrylate, hexanedioldiacrylate and polyethylenediacrylate~~
methacrylates.

10. (Currently Amended) A The process according to claim 1, wherein said thermoplastic polymer and said UV curable resin show a substantially similar refractive index.

11. (Currently Amended) A The process according to claim 1, wherein said substrate consists of metal, polymer, silicon, glass or quartz-glass.

Claims 12-15 (Canceled)

16. (New) The process of claim 1, wherein the polymeric optical microstructure has a thickness of less than 1 mm.

17. (New) The process of claim 1, wherein the UV curable resin is selected from the group consisting of ethoxylated bisphenol-A dimethacrylate, hexanedioldiacrylate and polyethylenediacrylate.

18.(New) The process of claim 1, wherein concentration of the UV curable resin is from 40 - 60 vol.% of said blend.

19.(New) The process of claim 1, wherein vitrification of the thermoplastic mixture occurs at not lower than 50°C.

20.(New) The process of claim 1, wherein the thickness to diameter ratio of the polymeric optical microstructure is from 1/50 to 1/100.